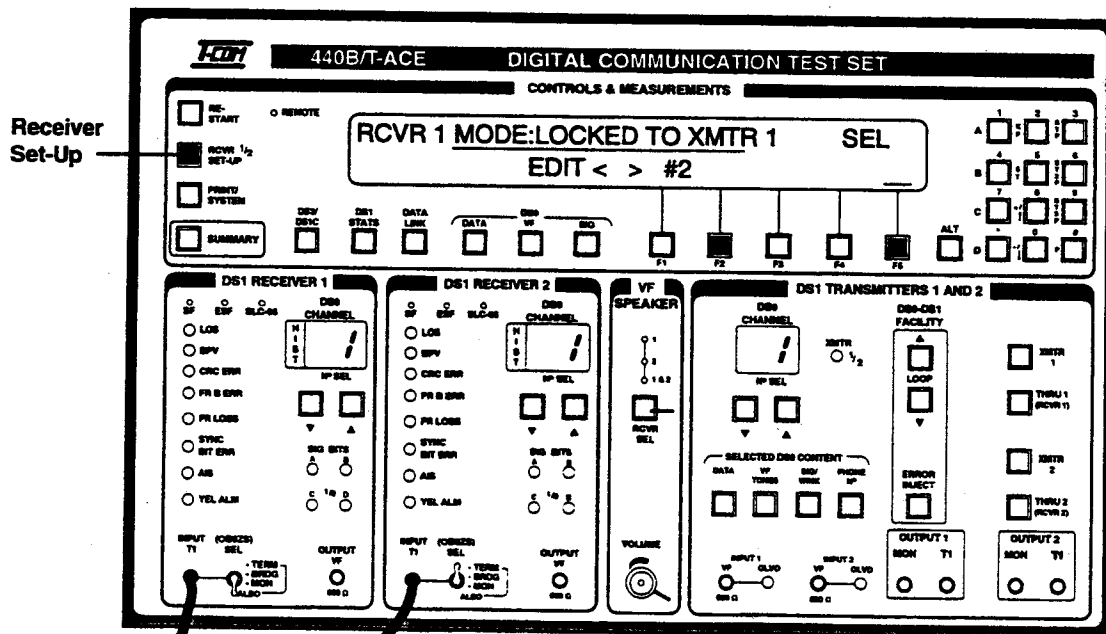


When a patchcord is patched into the T1 inputs, the receivers automatically monitor for DS1/T1 framing, errors and alarms. In addition, each receiver can simultaneously perform a Bit Error Rate (BERT) test using a stress pattern. Receivers can perform stress testing at different rates: T1, Fractional T1, and DS0A/B (2.4Kb/s through 64Kb/s). The Receiver Set-Up determines how each receiver will search for pattern sync. When receivers are set-up for DS0A/B testing the 440B also provides important in-service DS0A/B error monitoring by capturing DS0A majority vote errors, DS0A/B frame loss, DS0B Frame Bit errors, and DS0 secondary channel loss.

NOTE: No matter how a receiver is Set-Up, the 440B always monitors the DS1 rate for framing, errors and alarms. In other words, even when a receiver is performing a Fractional T1, or DS0B 9.6Kb/s BERT test, the test set continuously monitors for all DS1 errors. The SUMMARY screens will, therefore, display and provide HISTORY for all types of DS1 errors regardless of the Receiver Set-Up. This is an important feature for isolating T1 Network problems from DS0 or Fractional T1 equipment failures.

Receivers are configured for auto-frame and auto-pattern sync. When testing slower DDS rates (2.4Kb/s) the auto-pattern search can take up to a minute or so. This is because the 440B checks through a very comprehensive library of all known test patterns. Auto-pattern search can, however, be disabled in the PRINT/SYSTEM Configurations menu. (See PRINT/SYSTEM Configuration Tab section.) When auto-search is off, the receivers only search for the pattern sent by the corresponding transmitter (this speeds up the pattern synchronization process considerably). Auto-frame is always on.



Setting Receiver MODE: Locked To XMTR

Most people find it much easier to Set-Up tests from the transmitters, and simply have the Receivers automatically follow. When "Locked to XMTR" is set, the receiver will follow the transmitter set-up for T1, F-T1 or DS0 data testing.

For typical T1 loopback testing, RCVR 1 will be LOCKED TO XMTR 1 (Figure A), and RCVR 2 LOCKED TO XMTR 2. For DS0 Drop-and-Insert applications (THRU), both receivers may be locked to the same Transmitter. (See Figure B.)

In some cases, it will be useful to Set-Up a receiver independently from the transmitter (for example monitoring a DS0B subchannel, while transmitting into a different subchannel, or Fractional T1 testing).

Figure A: RCVR1 Locked to XMTR1 for T1 Loopback Testing

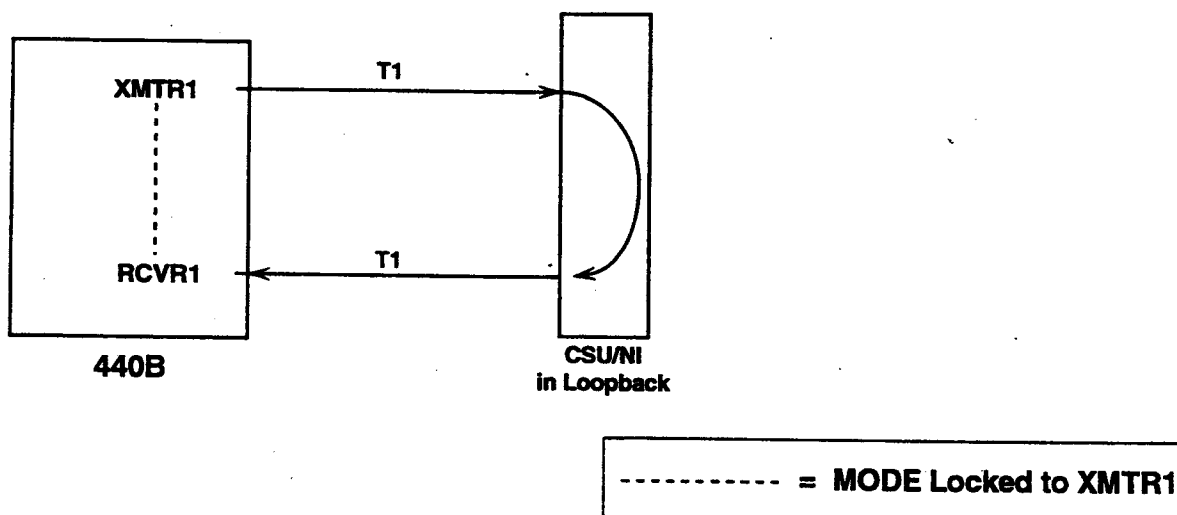
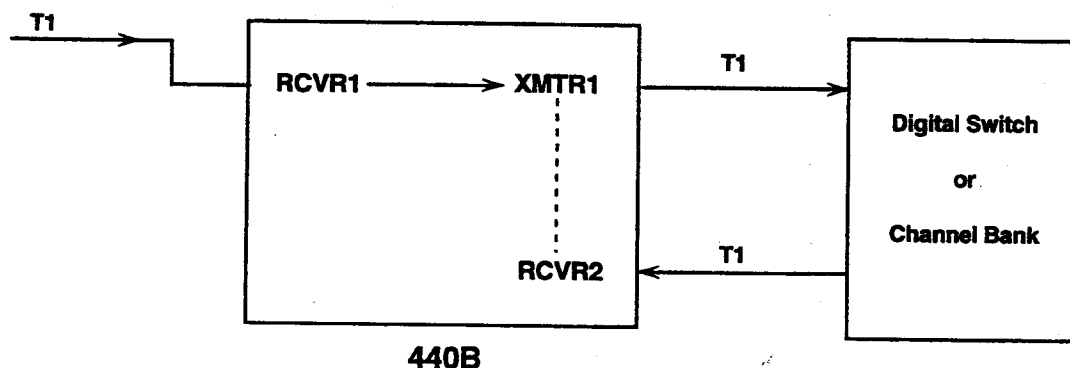


Figure B: RCVR1 & RCVR2 Locked to XMTR1 for Drop-and-Insert Testing

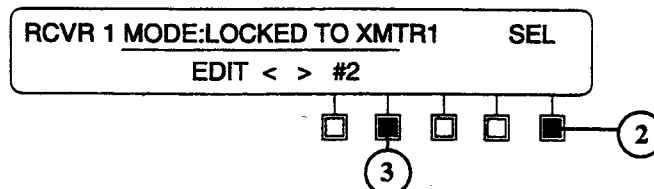


RECEIVER SET-UP

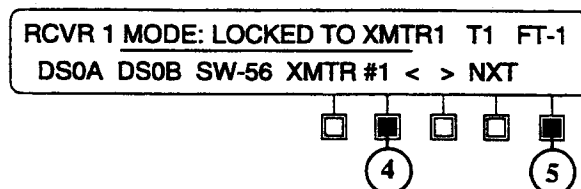
In nearly all cases, it is strongly suggested to lock the receivers to the desired transmitters.

Locking Receivers to Transmitters

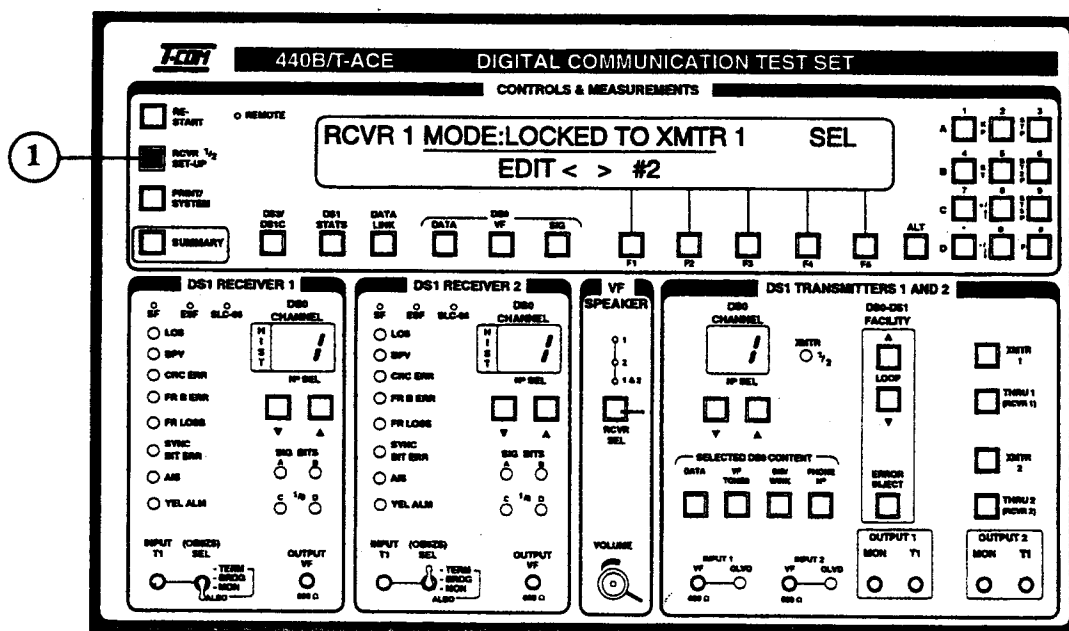
1. Press RCVR / SET-UP key to display SET-UP screen. Generally, the Set-Up will display LOCKED TO XMTR.



2. Use SEL softkey (F5) to toggle between RCVR 1 or RCVR 2 Set-Up screens.
3. Use the EDIT softkey to change the RCVR Set-Up. Pressing EDIT displays:



4. When LOCKED TO XMTR is underlined, XMTR # is displayed. The F2 softkey can be toggled to select either XMTR #1 or #2. For DS0 Drop-and-Insert, RCVR 2 will typically be Locked to XMTR #1. (See Figure B on previous page.)



RECEIVER 1 & 2 SET-UP

5. Press NXT to enter selection and display the opening Set-Up screen:

RCVR 1 MODE:LOCKED TO XMTR1 SEL
 EDIT < > #2

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Setting receivers independently of transmitters

6. Press RCVR Set-Up key to display the opening screen:

RCVR 1 MODE:LOCKED TO XMTR1 SEL
 EDIT < > #2

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7. Use SEL #2 softkey (F5) to toggle between RCVR 1 and RCVR2 set-up screens.

8. Press EDIT to display menu:

RCVR 1 MODE:LOCKED TO XMTR T1 F-T1
 DS0A DS0B SW-56 XMTR #1 < > #2

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Fractional T1

NOTE: When LOCKED TO XMTR, Fractional T1 test can be configured from XMTR and the receiver will automatically match the configuration. Setting up the receiver separately may be useful for troubleshooting esoteric troubles on "non-selected" Idle channels. (See Quick Sheet 4, page 9)

RCVR 1 MODE:LOCKED TO XMTR T1 F-T1
 DS0A DS0B SW-56 XMTR #1 < > #2

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9. Underline F-T1 and press the NXT softkey to display:

RCVR 1 MODE:F-T1 MAP: 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 SEL
 EDIT < > #2

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relative channel positions
 1 2 3 4 5 6 7 8 ...
 1 = selected
 0 = "Idle"

-
- DS0 Channels → 1234.....10.12.....24
- Channels 1, 3, 5 selected at 64 Kb/s each → 123456789,123456789,1234 RCVR 1 FT1 DS0s
- 10101000000000000000000000000000 64K < > NXT
- 11 12

- RCVR 1 MODE:F-T1 MAP:1111111111111111 SEL
EDIT < > #2

RCVR 1 MODE:LOCKED TO XMTR1 SEL
EDIT < > #2

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- RCVR 1 MODE: LOCKED TO XMTR1 T1 F-T1
DS0A DS0B SW-56 XMTR #1 < > NXT
- known only if
- 16

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RECEIVER 1 & 2 SET-UP

16. Use the < > softkeys to underline DS0B (or DS0A), and press NXT to enter selection and display the new RCVR set-up screen:

RCVR 1	MODE:DS0B	RATE:9.6	SEL
	SUBCH:#1	EDIT < > #2	

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17. Underline RATE: 9.6 and press EDIT to display the menu for changing rates:

RCVR 1	RATE: 2.4 4.8 9.6 19.2
	< > NXT

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18. Use the < > softkeys to underline the desired rate, and press NXT to enter the selection. Pressing NXT displays the opening screen:

RCVR 1	MODE: DS0B	RATE:9.6	SEL
	SUBCH:#1	EDIT < > #2	

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19. Use the softkey F1 to toggle through subchannels.

RCVR 1	MODE:DS0B	RATE:9.6	SEL
	SUBCH:#3	EDIT < > #2	

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20. To resume the LOCKED TO XMTR mode, use < > softkeys to underline MODE: DS0B and press EDIT to display menu screen:

RCVR 1	MODE: LOCKED TO XMTR	T1 F-T1
	DS0A DS0B SW-56 XMTR:#1	< > NXT

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21. Underline LOCKED TO XMTR and select desired XMTR that the receiver is to be locked to with softkey F2. Press NXT to enter selection and display new opening screen:

RCVR 1	MODE:LOCKED TO XMTR1	SEL
	EDIT < > #2	

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